**HHE 526: Introduction to Biostatistics**

**Lab #3 Assignment**

**Instructions**

1. Review rhe Lead data and description document
2. Review the blood pressure study data and description document
3. Using SPSS or SAS (or approved software) to complete the assignment.
4. Submit your assignment describing your results as a word document.
5. Also, make sure to submit your relevant result output.
6. **Note that 2 points will be deducted for not submitting your statistical program output.**

**Question**

1. **Two independent sample t-test using the variable Age**

Assuming a normal distribution and you have data about two groups – the exposed and the control group.

(Hint review the variable description document for Lead data).

Conduct a t-test comparing the mean ages of the two groups.

1. What is the mean and standard deviation of children in exposed and control groups (1 pts)
2. In words write your hypothesis statement comparing the mean ages (0.5 pt)
3. Using symbols, state your hypothesis (0.5 pt)
4. Conduct a test for equality of variance between the two-sample. What does your result indicate? (2 pt)
5. Conduct a two-sample t-test and report the appropriate result (2 pt)
6. **Non-parametric test using the variable for raw score/performance IQ**

Assuming the distribution of the samples is unknown, and you have data about two groups – the exposed and the control group

(Hint: review the variable description document for Lead data).

Conduct a non-parametric test comparing the median raw score/performance IQ of the two groups.

1. What is the median raw score/performance IQ of the children in exposed and control groups (2 pt)
2. In words write your hypothesis statement comparing the median raw score/performance IQ between the two groups (0.5 pt)
3. Using symbols, state your hypothesis (0.5 pt)
4. Conduct the appropriate non-parametric test and report your findings (2 pt)
5. **Paired t-test using the data blood pressure**

An epidemiologist wants to know whether treatment with estrogen affects diastolic blood pressure (DBP). He had 62 participants measure their DBP before and after receiving estrogen tablet and record the readings. Assuming a normal distribution

(Hint: review the variable description document for blood pressure data).

1. What is the average DBP for the reading 1 and 2 (1 pt)
2. In words write your hypothesis statement comparing the DBP reading (0.5 pt)
3. Using symbols, state your hypothesis (0.5 pt)
4. Conduct a paired t-test for the two reading and report your findings (2 pt)

**Submit word document or pdf describing your results for above and submit the output of your analysis. Save the file as firstname-lastname-Stats-Lab3**